

Facility Name: **Carlyle Compressor Remanufacturing**  
City: Stone Mountain  
County: DeKalb  
AIRS #: 04-13-089-00313

Application #: TV-22919  
Date Application Received: October 24, 2014  
Permit No: 3585-089-0313-V-04-0

Program	Review Engineers	Review Managers
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Toxics	N/A	N/A
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## Introduction

This narrative is being provided to assist the reader in understanding the content of the attached draft Part 70 operating permit. Complex issues and unusual items are explained here in simpler terms and/or greater detail than is sometimes possible in the actual permit. This permit is being issued pursuant to: (1) Georgia Air Quality Act, O.C.G.A § 12-9-1, et seq. and (2) Georgia Rules for Air Quality Control, Chapter 391-3-1, and (3) Title V of the Clean Air Act. Section 391-3-1-.03(10) of the Georgia Rules for Air Quality Control incorporates requirements of Part 70 of Title 40 of the Code of Federal Regulations promulgated pursuant to the Federal Clean Air Act. The primary purpose of this permit is to consolidate and identify existing state and federal air requirements applicable to **Carlyle Compressor Remanufacturing** and to provide practical methods for determining compliance with these requirements. The following narrative is designed to accompany the draft permit and is presented in the same general order as the permit. It initially describes the facility receiving the permit, the applicable requirements and their significance, and the methods for determining compliance with those applicable requirements. This narrative is intended as an adjunct for the reviewer and to provide information only. It has no legal standing. Any revisions made to the permit in response to comments received during the public participation and EPA review process will be described in an addendum to this narrative.

**I. Facility Description****A. Facility Identification**

1. Facility Name: Carlyle Compressor Remanufacturing

2. Parent/Holding Company Name

Carrier Corporation

3. Previous and/or Other Name(s)

None known.

4. Facility Location

1440 Rock Mountain Boulevard  
Stone Mountain, Georgia 30083 (DeKalb County)

5. Attainment, Non-attainment Area Location, or Contributing Area

This facility is located in the Atlanta ozone non-attainment area.

**B. Site Determination**

There are no other facilities which could possibly be contiguous or adjacent and under common control.

**C. Existing Permits**

Table 1 below lists all current Title V permits, all amendments, 502(b)(10) changes, and off-permit changes, issued to the facility, based on a comparative review of form A.6, Current Permits, of the Title V application and the "Permit" file(s) on the facility found in the Air Branch office.

Permit Number and/or Off-Permit Change	Date of Issuance/ Effectiveness	Purpose of Issuance
Permit No. 3585-089-0313-V-03-0	December 3, 2010	Title V issuance

**D. Process Description**

1. SIC Codes(s)

3585

The SIC Code(s) identified above were assigned by EPD's Air Protection Branch for purposes pursuant to the Georgia Air Quality Act and related administrative purposes only and are not intended to be used for any other purpose. Assignment of SIC Codes by EPD's Air Protection Branch for these purposes does not prohibit the facility from using these or different SIC Codes for other regulatory and non-regulatory purposes.

Should the reference(s) to SIC Code(s) in any narratives or narrative addendum previously issued for the Title V permit for this facility conflict with the revised language herein, the language herein shall control; provided, however, language in previously issued narratives that does not expressly reference SIC Code(s) shall not be affected.

## 2. Description of Product(s)

This facility produces new and remanufactured compressors and motors for air condition and refrigeration applications.

## 3. Overall Facility Process Description

Carlyle is a division of Carrier Corporation and United Technology Corporation (UTC). Carlyle produces new and remanufactured compressors and motors for air condition and refrigeration applications. Compressors produced range from 5 to 120 tons of refrigeration capacity. Remanufacturing operation includes disassembling of old compressors and motors, cleaning of compressor components, inspecting of the components, sanding, gauging and/or machining of the components as needed, restacking and welding of stators, winding of motors, varnish dipping and electrical testing of remanufactured motors, re-assembling of the compressors and drying of the re-assembled compressors. The reassembled compressors are then pressure-tested, and waterproof coated. Manufacturing of new compressors only comprised of assembly of new components shipped from off-site suppliers, drying of assembled compressors, pressure testing of the compressors, and waterproof coating of the compressors. Supporting operations include maintenance, tool design and assembly, quality control, warranty repair, and wastewater treatment.

## 4. Overall Process Flow Diagram

The facility provided a process flow diagram in their Title V permit application.

## E. Regulatory Status

### 1. PSD/NSR

This facility is a NSR major source because it has potential to emit more than 25 tons per year (tpy) of volatile organic compounds (VOC) in the Atlanta ozone non-attainment area. Potential emissions of nitrogen oxides (NO<sub>x</sub>) from this facility are less than 25 tpy. This facility is a minor source for other criteria air pollutants. Any future facility modification causing any increases in criteria pollutant emissions will require a NSR applicability analyses to determine if the modification is major and thus subject to non-attainment area (NAA) permitting requirements under NSR and/or state regulations.

## 2. Title V Major Source Status by Pollutant

Table 2: Title V Major Source Status

Pollutant	Is the Pollutant Emitted?	If emitted, what is the facility's Title V status for the pollutant?		
		Major Source Status	Major Source Requesting SM Status	Non-Major Source Status
PM	✓			✓
PM <sub>10</sub>	✓			✓
SO <sub>2</sub>	✓			✓
VOC	✓	✓		
NO <sub>x</sub>	✓			✓
CO	✓			✓
TRS	N/A			
H <sub>2</sub> S	N/A			
Individual HAP	✓		✓	
Total HAPs	✓		✓	

## 3. MACT Standards

This facility is potentially a major source under NESHAP because it has potential to emit more than 10 tpy of individual HAP, but has taken emission limits of 10 tpy for individual HAP and 25 tpy for all HAPs combined. These emission limits allow the facility to remain a minor source under NESHAP regulations and to avoid the requirements of 40 CFR Part 63 Subpart M - “National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products”.

The facility is not subject to 40 CFR 63 Subpart WWWW, 40CFR 63 Subpart XXXXXX, or 40 CFR 63 Subpart HHHHHH because the facility does not use any of the target HAPS

## 4. Program Applicability (AIRS Program Codes)

Program Code	Applicable (y/n)
Program Code 6 - PSD	No
Program Code 8 – Part 61 NESHAP	No
Program Code 9 - NSPS	No
Program Code M – Part 63 NESHAP	No
Program Code V – Title V	Yes

## Regulatory Analysis

### II. Facility Wide Requirements

#### A. Emission and Operating Caps:

The facility will continue to have a facility-wide 50 tpy VOC emission limit, 10 tpy for individual hazardous air pollutants (HAP) and 25 tpy for combined hazardous air pollutants.

The 50 tpy facility-wide VOC emission cap was established upon the request of the company during the issuance of permit No. 3585-089-0313-S-01-0 (Issued May 15, 2001) to allow the facility to remain a minor source under non-attainment area (NAA) NSR rules. Since then, the major source thresholds for VOC and NO<sub>x</sub> emissions in the Atlanta ozone non-attainment area have been reduced to 25 tpy after EPA's reclassification. Because the facility has potential to emit more than 25 tpy of VOC, this facility is now considered as a major source of VOC emissions under pertinent NSR and state regulations.

The facility is not a major source under NESHAP regulations by limiting the facility wide HAP emissions to 10 tpy for individual hazardous air pollutants and 25 tpy for combined hazardous air pollutants.

#### B. Applicable Rules and Regulations

None applicable.

#### C. Compliance Status

There are no facility wide compliance issues noted in this application.

#### D. Operational Flexibility

None applicable.

#### E. Permit Conditions

Renewal Condition	Original Condition		Notes
	Number	Permit	
2.1.1	2.1.1	Initial	Limits the VOC emissions from the entire facility to 50 tons during any twelve consecutive month period.
2.1.2	2.1.2	Initial	Limits the facility's HAP emissions from the entire facility to 10 tons of any one HAP or 25 tons of all combined HAPs during any twelve consecutive month period.

### Regulated Equipment Requirements

#### F. Brief Process Description

This facility produces new and remanufactured compressors and motors for air condition and refrigeration applications. Compressors produced range from 5 to 120 tons of refrigeration capacity.

## G. Equipment List for the Process

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirements/Standards	Corresponding Permit Conditions	ID No.	Description
MM01	Miscellaneous Material Usage Operations	391-3-1-.02(2)(ii)	2.1.1, 2.1.2, 3.4.1, 3.5.1, 3.5.2, 5.2.1, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.9	N/A	None
1100	Paint Booth D	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(ii)	2.1.1, 2.1.2, 3.4.1, 3.4.3, 3.4.4, 3.5.1, 3.5.2, 3.5.3, 3.5.4, 5.2.1, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.9, 6.2.11, 6.2.12		Filter Banks
1101	Paint Booth Spare	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(ii)	2.1.1, 2.1.2, 3.4.1, 3.4.3, 3.4.4, 3.5.1, 3.5.2, 3.5.3, 3.5.4, 5.2.1, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.9, 6.2.11, 6.2.12		Filter Banks
1475	Paint Booth Remanufactured	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(ii)	2.1.1, 2.1.2, 3.4.1, 3.4.3, 3.4.4, 3.5.1, 3.5.2, 3.5.3, 3.5.4, 5.2.1, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.9, 6.2.11, 6.2.12		Filter Banks
1590	Paint Booth S	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(ii)	2.1.1, 2.1.2, 3.4.1, 3.4.3, 3.4.4, 3.5.1, 3.5.2, 3.5.3, 3.5.4, 5.2.1, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.9, 6.2.11, 6.2.12		Filter Banks
5383	Paint Booth GK	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(ii)	2.1.1, 2.1.2, 3.4.1, 3.4.3, 3.4.4, 3.5.1, 3.5.2, 3.5.3, 3.5.4, 5.2.1, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.9, 6.2.11, 6.2.12		Filter Banks
VD01	Varnish Dip Tank 1	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(ii)	2.1.1, 2.1.2, 3.4.1, 3.4.3, 3.4.4, 3.5.1, 3.5.2, 3.5.4, 5.2.1, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.9	N/A	None
WOST	6,800-gallon 32 Weight Oil Storage Tank	391-3-1-.02(2)(vv)	2.1.1, 3.4.2, 6.2.1, 6.2.2, 6.2.3, 6.2.9	N/A	None

\*Note that some of the equipment in Section 3.1 has been renamed as requested in Application No 22919.

\*\*Note: The Varnish Dip Tank 2 (Source Code VD02) has been removed.

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirements/Standards	Corresponding Permit Conditions	ID No.	Description
<del>VD02</del>	<del>Varnish Dip Tank 2</del>	<del>391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(ii)</del>	<del>2.1.1, 2.1.2, 3.4.1, 3.4.3, 3.4.4, 3.5.1, 3.5.2, 5.2.1, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.9</del>	<del>N/A</del>	<del>None</del>

## H. Equipment & Rule Applicability

Emission and Operating Caps: None applicable.

### Rules and Regulations Assessment:

**Georgia Rule 391-3-1-.02(2)(b)**, “*Visible Emissions*” applies to all the process units at this facility which do not have a more stringent limit. Visible emissions are limited by this Rule to less than 40% opacity. The visible emissions from this facility are substantially below 40% opacity due to the nature of the production processes involved.

**Georgia Rule 391-3-1-.02(2)(e)**, “*Particulate Emission from Manufacturing Processes*” applies to all process units at this facility that are not covered by a more specific rule or regulation. This Rule establishes PM emission limits for the process units based on their process weight input rates. PM emissions from this facility are substantially below the applicable Georgia Rule (e) limits due to the natural of the production processes involved.

The existing miscellaneous metal parts surface coating operation at this facility is subject to **Georgia Rule 391-3-1-.02(2)(ii)**, “*VOC Emissions from Surface Coating of Miscellaneous metal parts and Products*”. The facility has been complying with the applicable VOC emission limit(s) in Georgia Rule (ii) without using VOC control.

**Georgia Rule 391-3-1-.02(2)(vv)**, “*Volatile Organic Liquid handling and Storage*” applies to the transfer of any volatile organic liquid other than gasoline from any delivery vessel into any stationary tank(s) of greater than 4,000 gallons at this facility. Georgia Rule (vv) requires the tank(s) be equipped with submerged fill pipes. Currently the only source at this facility subject to this rule is the 6,800 gallon weight oil storage tank.

**\*\*\*NON - applicability Georgia Rule 391-3-1-.02(2)(tt) – VOC Emissions from Major Sources**

The facility is subject to Georgia Rule 391-3-1-.02(2)(ii), which has specific limits for extreme performance coatings. As such, the facility will be required to adhere to specific limits on both VOC limits per gallon of coating and VOC per gallon of coating solids (see Condition 3.4.1). Although the facility is in the Atlanta non-attainment area and emits greater than 25 tons per year, because the facility is subject to Georgia Rule (ii), Georgia Rule (tt) does not apply.

## I. Compliance Status

There are no equipment related compliance issues noted in this application.

## J. Operational Flexibility

None applicable.

**K. Permit Conditions**

Renewal Condition	Original Condition		Notes
	Number	Permit	
3.4.1	3.4.1	Initial	Subjects the metal parts surface coating operation at this facility to Georgia Rule 391-3-1-.02(2)(ii) which limits the VOC emissions from the coating operation according to the types of the coatings being used.
3.4.2	3.4.2	Initial	Subjects the 6,800-gallon oil storage tank to Georgia Rule (vv) which requires the tank be equipped with submerged fill pipe(s).
3.4.3	3.4.3	Initial	Rule (e) Emission limit based on process rate.
3.4.4	3.4.4	Initial	Rule (b) 40% Opacity limit.
3.5.1-3.5.2	3.5.1-3.5.2	Initial	Establish work practice standards for reducing unintended VOC emissions due to solvent evaporation.
3.5.3	---	---	Added to ensure the emissions from all paint booths are passed through a serviceable dry particulate filter system before exhausting the emissions to the atmosphere at all times.
3.5.4	---	---	Added such that Carlyle must perform filter changes of the dry paint filters/paint pockets for the paint booth(s) when the pressure drop reading(s) for the paint booth filters/paint pockets is(are) outside the manufacturer's recommended pressure drop range for that paint booth filter/paint pocket.

**Testing Requirements (with Associated Record Keeping and Reporting)****L. General Testing Requirements**

The permit includes a requirement that the Permittee conduct performance testing on any specified emission unit when directed by the Division. Additionally, a written notification of any performance test(s) is required 30 days (or sixty (60) days for tests required by 40 CFR Part 63) prior to the date of the test(s) and a test plan is required to be submitted with the test notification. Test methods and procedures for determining compliance with applicable emission limitations are listed and test results are required to be submitted to the Division within 60 days of completion of the testing.

**M. Specific Testing Requirements****1. Individual Equipment**

None applicable.

**2. Equipment Groups (all subject to the same test requirements):**

None applicable.

**III. Monitoring Requirements****A. Specific Monitoring Requirements****1. Individual Equipment:**

None applicable.



## 2. Equipment Groups (all subject to the same monitoring requirements):

Renewal Condition	Original Condition		Notes
	Number	Permit	
5.1.1	5.1.1	Initial	Requires that all continuous monitoring systems required by the Division be operated continuously except during monitoring system breakdowns and repairs. Monitoring system response during quality assurance activities is required to be measured and recorded. Maintenance or repair is required to be conducted in an expeditious manner.
5.2.1	5.2.1	Initial	Carlyle must install, calibrate, maintain, and operate monitoring devices for the measurement of the pressure drop across each paint booth filter/paint pocket and the pressure drop data shall be recorded daily in the facility operations log, if the paint booth(s) is (are) operated.
5.2.2	---	---	Requires monthly inspections to ensure compliance with the work practice standards of Conditions 3.5.1 and 3.5.2.

## B. Compliance Assurance Monitoring (CAM)

Not applicable because the precontrolled PM emissions from individual filter banks does not exceed CAM threshold of 100 tons per year.

## IV. Record Keeping and Reporting Requirements

## A. General Record Keeping and Reporting Requirements

The Permit contains general requirements for the maintenance of all records for a period of five years following the date of entry and requires the prompt reporting of all information related to deviations from the applicable requirements. Records, including identification of any excess emissions, exceedances, or excursions from the applicable monitoring triggers, the cause of such occurrence, and the corrective action taken, are required to be kept by the Permittee and reporting is required on a semiannual basis.

## B. Specific Record Keeping and Reporting Requirements

Renewal Condition(s)	Original Condition		Notes
	Number	Permit	
6.1.1 – 6.1.6	6.1.1 – 6.1.6	Initial	Standard record keeping and reporting requirements. Updated and slightly modified.

Renewal Condition(s)	Original Condition		Notes
	Number	Permit	
6.1.7	6.1.7	Initial	<p><u>Exceedances</u> Each 12-month rolling total of VOC emissions from the entire facility that equals or exceeds 50 tons; Each 12-month rolling total of emissions of any individual HAP or all HAPs combined from the entire facility that equals or exceeds 10 tons or 25 tons, respectively. Any instance that the VOC emissions from any individual miscellaneous metal part surface coating operation/line exceed the applicable limitation specified in Condition 3.4.1.</p> <p><u>Excursions</u> Any instance(s) of not following the work practice requirement of Condition 3.4.2; Any instance of failure to compliance with work practice standards in Condition 3.5.1 or 3.5.2 as indicated by the monthly inspections required by Condition 5.2.1. Anytime when the filter changers are not completed in accordance with Condition 3.5.4.</p> <p><u>Addition to the excess emissions, exceedances and excursions</u> All the 12-month rolling totals of VOC emissions from the entire facility during the current semiannual reporting period; All the 12-month rolling totals of emissions of each individual HAP and all HAPs combined from the entire facility during the current semiannual reporting period, respectively.</p>
6.1.8	6.1.8	Initial	The facility must provide the Division with a statement, in such form as the Director may prescribe, showing the actual emissions of NO <sub>x</sub> and VOCs from the entire facility.
6.2.1-6.2.3	6.2.1-6.2.3	Initial	Condition Nos. 6.2.1 through 6.2.3 require the facility to maintain monthly VOC usage records, to calculate monthly VOC emissions from the entire facility and to calculate the 12-month rolling totals of VOC emissions from the entire facility. Any exceedances of the limits specified in Condition No. 2.1.1 are required to be reported.
6.2.4-6.2.6	6.2.4-6.2.6	Initial	Condition Nos. 6.2.4 through 6.2.6 require the facility to maintain HAP usage records, to calculate individual monthly HAP emissions and monthly combined HAP emissions from the entire facility and to calculate the 12-month rolling totals of individual HAP emissions and combined HAP emissions from the entire facility. Any exceedances of the limits specified in Condition No. 2.1.2 are required to be reported.
6.2.7-6.2.8	6.2.7-6.2.8	Initial	Conditions 6.2.7 and 6.2.8 requires record keeping, compliance demonstration, and reporting requirements for Georgia Rule (ii).
6.2.9	6.2.9	Initial	Establishes a record keeping requirement for the 6,800-gallon oil storage tank which is required by Georgia Rule (vv) to have submerged fill pipes. This condition allows the demonstration of compliance with Condition 3.4.2.
6.2.10	6.2.10	Initial	The facility must notify the Division of the change(s) in writing within thirty (30) days after subjecting any of the miscellaneous metal part and products surface coating line(s) at this facility to a different VOC emission limit(s) or compliance method(s) as allowed by Condition 3.4.1.
6.2.11	---		Added such that Carlyle must maintain a log indicating the date that each paint booth filter/paint pocket is replaced in spray booths.
6.2.12	---		Added such that Carlyle must maintain a log of the pressure drop monitoring required by Condition 5.2.4 and record the date and time of the observation, the filter manufacturer's recommended maximum pressure drop, the pressure drop, and note if the filter media/paint pocket was changed.

**V. Specific Requirements****A. Operational Flexibility**

- None applicable.

**B. Alternative Requirements**

- None applicable.

**C. Insignificant Activities**

Refer to <http://airpermit.dnr.state.ga.us/GATV/default.asp> for the Online Title V Application.

Refer to the following forms in the Title V permit application:

- Form D.1 (Insignificant Activities Checklist)
- Form D.2 (Generic Emissions Groups)
- Form D.3 (Generic Fuel Burning Equipment)
- Form D.6 (Insignificant Activities Based on Emission Levels of the Title V permit application)

**D. Temporary Sources**

- None applicable.

**E. Short-Term Activities**

- None applicable.

**F. Compliance Schedule/Progress Reports**

- The facility is currently operating in compliance with all applicable rules and standards.

**G. Emissions Trading**

- Not applicable.

**H. Acid Rain Requirements**

- Not applicable.

**I. Stratospheric Ozone Protection Requirements**

- The facility is subject to Title VI requirements due to usage of stratospheric ozone-depleting substances listed in 40 CFR Part 82, Subpart A, Appendices A and B.

J. Pollution Prevention

- Not applicable.

K. Specific Conditions

- There are no additional facility-specific conditions that are not covered elsewhere.

**VI. General Provisions**

Generic provisions have been included in this permit to address the requirements in 40 CFR Part 70 that apply to all Title V sources, and the requirements in Chapter 391-3-1 of the Georgia Rules for Air Quality Control that apply to all stationary sources of air pollution.